bio power and 20,000 MW solar power as envisaged by 2020 under the National Solar Mission approved recently), which would correspond to a share of about 9% in the then likely electricity-mix from all sources.

Conversion of cities into solar townships

1155. SHRI R.C. SINGH: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether it is a fact that his Ministry is planning to convert 60 cities into solar townships;

(b) if so, the details of cities that are proposed to be converted into solar cities in West Bengal;

(c) whether any criteria has been adopted for declaring a particular city into a solar township; and

(d) if so, the details thereof?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH): (a) to (d) The Ministry of New and Renewable Energy is implementing a programme on 'Development of Solar Cities'. The programme aims to reduce a minimum of 10% of the projected demand of conventional energy of the City through energy efficiency measures and renewable energy installations. Sixty cities are proposed to be developed as solar cities during the Eleventh Plan period including two model solar cities. So far, no proposal has been received from West-Bengal.

Expenditure on R&D on renewable energy

1156. SHRI RAHUL BAJAJ:
SHRI RAJKUMAR DHOOT:

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) the level of R&D spending in Government sector on renewable energy during the last three years; and

(b) the major R&D projects in this area and their planned outlays, outcome timelines?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH): (a) and (b) During the last three years an expenditure of Rs. 367.87 crore has been incurred on R&D for carrying out research, development and demonstration in different areas of new and renewable energy by various Government Departments/organizations. The major projects/areas include development of high efficiency solar cells, hydrogen and fuel cells, solar photovoltaic and thermal power, high rate bio-methanation, medium and large capacity biogas plants for energy and power generation, bio-fuels and biomass energy including development of standards, specifications and testing of various renewable energy systems, devices and others. For the Eleventh Five year Plan Ministry of New and Renewable Energy has made a provision of Rs. 500

crore for taking up research, design, development and technology demonstration in the area of renewable energy.

Projection of alternative energy sources

1157. SHRI NARESH GUJRAL: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) the projections of power generation through alternative energy sources for the next five years;

(b) the amount of investment envisaged to achieve these targets;

(c) whether Government plans to incentives the Private Sector to participate in setting up alternate energy power plants in the country; and

(d) if so, incentives being planned?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH): (a) A capacity addition of 12,300 MW grid-interactive renewable power is targeted during the Eleventh Plan that would lead to a total capacity of around 22,500 MW by March, 2012, from 15,539 MW at present (as on 31.10.2009). Further capacity addition of around 25,500 MW is envisaged during the Twelfth Plan, leading to a total capacity of around 48,000 MW by March 2017 (comprising 33,400 wind power, 5,900 MW small hydro power, 5,200 MW bio power and 3,500 MW solar power aimed under the National Solar Mission approved recently). The same would correspond to a share of about 9% in the then likely electricity-mix from all sources.

(b) The total investment needed for achieving the targeted capacity addition of 12,300 MW during Eleventh plan period is estimated at Rs. 67,000 crore, with budgetary support of around Rs. 4,000 crore. The balance is envisaged as private investment driven mainly by fiscal incentives. The capacity addition of 25,500 MW during Twelfth plan will need total investment to the tune of Rs. 1,63,000 crore, which is also envisaged mainly as private investment.

(c) and (d) The Government is already encouraging private sector participation in setting up of various renewable energy projects through a mix of fiscal and financial incentives and other policy/regulatory measures. These include capital/interest subsidy, accelerated depreciation and nil/concessional excise and customs duties. Under the Electricity Act 2003, it has been made obligatory upon State Electricity Regulatory Authorities to fix a minimum percentage for purchase of electricity from renewable sources taking into account local factors. Preferential tariff for grid interactive renewable power is being given in most potential States following the provisions made under the National Electricity Policy 2005 and National Tariff Policy 2006. Uniform guidelines by CERC for fixation of such preferential tariffs have been issued recently. The National Solar Mission approved recently is also expected to enable large-scale capital investment in solar energy applications.